**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1. (Currently Amended) An isolated nucleic acid encoding a taste transduction G-protein coupled receptor, wherein the receptor comprises an amino acid sequence having at least ~~80%~~ 90% identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor has G-protein coupled receptor activity ~~binds to glutamate, which induces GPCR activity~~.

4. (Original) The isolated nucleic acid of claim 1, wherein the nucleic acid encodes a receptor comprising an amino acid sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.

5. (Original) The isolated nucleic acid sequence of claim 1, wherein the nucleic acid comprises a nucleotide sequence of SEQ ID NO:4, SEQ ID NO:5, or SEQ ID NO:6.

6. (Original) The isolated nucleic acid of claim 1, wherein the nucleic acid is from a human, a mouse, or a rat.

8. (Original) The isolated nucleic acid of claim 1, wherein the nucleic acid encodes a receptor having a molecular weight of about between 92 kDa to about 102 kDa.

34. (Original) An expression vector comprising the nucleic acid of claim 1.

35. (Original) A host cell transfected with the vector of claim 34.

61. (Currently Amended) A method of making a taste transduction G-protein coupled receptor, the method comprising the step of expressing the receptor from a recombinant expression vector comprising a nucleic acid encoding the receptor, wherein the receptor comprises an amino acid sequence having at least ~~80%~~ 90% sequence identity to SEQ ID NO:1,

SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor has G-protein coupled receptor activity ~~binds glutamate, which induces GPCR activity~~.

62. (Currently Amended) A method of making a recombinant cell comprising a taste transduction G-protein coupled receptor, the method comprising the step of transducing the cell with an expression vector comprising a nucleic acid encoding the receptor, wherein the receptor comprises an amino acid sequence having at least ~~80%~~ 90% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor has G-protein coupled receptor activity ~~binds glutamate, which induces GPCR activity~~.

63. (Currently Amended) A method of making an recombinant expression vector comprising a nucleic acid encoding a taste transduction G-protein coupled receptor, the method comprising the step of ligating to an expression vector a nucleic acid encoding the receptor, wherein the receptor comprises an amino acid sequence having at least ~~80%~~ 90% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3, and wherein the receptor has G-protein coupled receptor activity ~~binds glutamate, which induces GPCR activity~~.

64. (Currently Amended) The nucleic acid of claim 1, wherein the receptor comprises an amino acid sequence have at least ~~90%~~ 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.

65. (Currently Amended) The method of claim 61, wherein the receptor comprises an amino acid sequence have at least ~~90%~~ 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.

66. (Currently Amended) The method of claim 62, wherein the receptor comprises an amino acid sequence have at least ~~90%~~ 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.

67. (Currently Amended) The method of claim 63, wherein the receptor comprises an amino acid sequence have at least ~~90%~~ 95% sequence identity to SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:3.